I INTRODUCTION

Impression evidence encompasses many different transfers. Any time two objects come into contact; there is the potential for impression evidence. In theory, any contact between the source of an impression and a surface results in a transfer of material between the two objects. Successful detection of that transfer to reveal a sufficient impression requires that the surface is receptive for a deposit, that is, relatively smooth for two-dimensional impressions. And in the case of three-dimensional impressions, the receiving material must be capable of being impressed by the contacting object. Regardless of the object which makes the impression, or the objects which receive the impression, the case is worked by direct comparison of questioned and known.

Residue once deposited is immediately subjected to environmental conditions. Heat, humidity, air movements, airborne contaminants, chemical reactions and interactions, light, time, and moisture may alter the condition and dictate the chances for detection of any impression. While any precise determination as to the effects surface condition, transfer medium, and subsequent environment may have on the successful visualization of impression residue is impossible. Most factors concerning the survival of the impression are negative and when of sufficient degree or combined in various arrangements will diminish or destroy the likelihood of detection. Human involvement is another factor in the successful detection of impressions, in that the impressions must be sought after by the crime scene technician. However, many impressions may be destroyed by victims or personnel responding to the scene; by driving over tire tracks and by walking on footwear impressions.

Impression evidence is normally submitted to the laboratory having been preserved at the crime scene, usually in the form of photography, lifted impressions, castings or may be visible on the evidence itself. While general procedures for evidence examination are usually divided into two categories, two-dimensional and three-dimensional impressions, each of the categories contain variations.

Visual examination of evidence is the first step in the processing procedure. Visual inspection for impressions on evidence submitted to the laboratory is usually preserved photographically. In addition, visual inspection is the mechanism by which processing procedures are selected from observation of the residue, its condition, and composition, if determined.